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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/786,333	03/08/2001	Patrick Defay	204251US2PCT	5071
22850	7590	09/30/2005	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			JELINEK, BRIAN J	
			ART UNIT	PAPER NUMBER
			2615	

DATE MAILED: 09/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/786,333

Applicant(s)

DEFAY, PATRICK

Examiner

Brian Jelinek

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 July 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Amendment

The Examiner respectfully submits a response to the amendment received on 7/7/2005 of application no. 09/786,333 filed on 3/8/2001 in which claims 11-28 are currently pending.

Applicant's Arguments

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 11, 13, 17, and 20-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bauer, II (U.S. Pat. No. 3,692,394), in view of Ohshima et al. (U.S. Pat. No. 4,812, 911), and further in view of Hines (U.S. Pat. No. 6, 122, 455).

Regarding claim 11, Bauer discloses a camera having an optical axis and comprising: an objective having an objective focal plane crossing the optical axis (Fig. 1, element 20); an optical viewfinder located off the optical axis (Fig. 1, element 28) and

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configured to provide an off-field view image because the light reaching the optical view finder is different from the light reaching the imaging plane, the light of the optical viewfinder being designated the off-field view (Fig. 1); and a shutter configured to allow the light of the optical axis to pass through the shutter, in an open position, towards the objective focal plane crossing the optical axis and configured to direct the light passing along the optical axis, in a closed position, towards the optical viewfinder located off the optical axis (Fig. 1, element 16).

Bauer does not disclose a spectral splitter configured to split light passing along the optical axis into spectral components; photoelectric-effect sensors each configured to receive a respective one of the spectral components; and an optical view finder including a useful field image detected by the photoelectric-effect sensors and a peripheral field image contacting a periphery of the useful field image.

However, Ohshima discloses a spectral splitter configured to split light passing along the optical axis into spectral components (Fig. 1, element 8); and photoelectric-effect sensors each configured to receive a respective one of the spectral components (Fig. 1, element 9A-9C). One of ordinary skill in the art at the time of the invention would have substituted the spectral splitter and photoelectric-effect sensors for the film of Bauer in order to capture digital images in studio quality. As a result, it would have been obvious to one of ordinary skill in the art at the time of the invention to have substituted the spectral splitter and photoelectric-effect sensors for the film of Bauer in order to capture digital images in studio quality.

Furthermore, Hines discloses a viewfinder with a wider field of view than will actually be photographed (Fig. 7A). One of ordinary skill in the art would have configured the viewfinder of Bauer with a wider field of view than will actually be photographed in order to help the photographer compose the picture (col. 6, lines 46-48). As a result, it would have been obvious to one of ordinary skill in the art at the time of the invention to have configured the viewfinder of Bauer to include a useful field image detected by the photoelectric-effect sensors and a peripheral field image contacting a periphery of the useful field image for providing a viewfinder with a wider field of view than will actually be photographed in order to help the photographer compose the picture.

Regarding claim 13, Bauer discloses the shutter comprises at least one rotational element including at least one mirror part corresponding to the closed position and at least one aperture part corresponding to the open position (Fig. 1, elements 30 and 32).

Regarding claim 17, Bauer discloses the rotative element includes at least two mirror parts and at least two aperture parts, the mirror parts all cover a first angular sector and the aperture parts all cover a second angular sector (Fig. 2, elements 16, 30, 32).

Regarding claim 20, Ohshima discloses splitting imaging light into different light components and then capturing each component on a different image pickup element. Neither Bauer nor Ohshima disclose a screen to view the synthesis of the different light components after their passage into a processing means. Official Notice is given that it is well known to view on a screen a photographic scene that has been synthesized from

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different light components after being processed (e.g., viewing an LCD screen on a 3-CCD camera) so that the image taken by the camera can have a useful output.

Regarding claim 21, Ohshima discloses mounting a camera body (Fig. 1, element 7) comprising image pickup elements (Fig. 1, elements 9A-9C). Ohshima does not disclose an adapter lens to match the camera body to the camera. However, Official Notice is given that it is well known in the art to provide an adapter lens to match the optical system of a camera to a universal camera body. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have provided an adapter lens configured to receive the light passing along the optical axis after having passed through the shutter and the focal plane, wherein the spectral splitter is configured to receive the light passing along the optical axis after having passed through the adapter for the purpose of matching the optical system of a camera to a universal camera body.

Regarding claim 22, Bauer discloses a camera having an optical axis and comprising: an optical viewfinder located off the optical axis and configured to provide and off-field view image (Fig. 1, element 28) because the light reaching the optical viewfinder is different from the light reaching the imaging plane, the light of the optical viewfinder being designated the off-field view (Fig. 1); and means for directing the light passing along the optical axis to both the optical viewfinder and an imaging plane (Fig. 1, element 16) such that an off-field view is available to a user during imaging (col. 2, lines 4-28).

Bauer does not disclose a means for splitting light passing along the optical axis into spectral components; photoelectric-effect means for receiving a respective one of the spectral components; and an optical view finder including a useful field image detected by the photoelectric-effect sensors and a peripheral field image contacting a periphery of the useful field image.

However, Ohshima discloses a means for splitting light passing along the optical axis into spectral components (Fig. 1, element 8); and photoelectric-effect means for receiving a respective one of the spectral components (Fig. 1, element 9A-9C). One of ordinary skill in the art at the time of the invention would have provided the spectral splitter and photoelectric-effect sensors for the film of Bauer in order to capture digital images in studio quality. As a result, it would have been obvious to one of ordinary skill in the art at the time of the invention to have provided the spectral splitter and photoelectric-effect sensors for the film of Bauer in order to capture digital images in studio quality.

Furthermore, Hines discloses a viewfinder with a wider field of view than will actually be photographed (Fig. 7A). One of ordinary skill in the art would have configured the viewfinder of Bauer with a wider field of view than will actually be photographed in order to help the photographer compose the picture (col. 6, lines 46-48). As a result, it would have been obvious to one of ordinary skill in the art at the time of the invention to have configured the viewfinder of Bauer to include a useful field image detected by the photoelectric-effect sensors and a peripheral field image contacting a periphery of the useful field image for providing a viewfinder with a wider

field of view than will actually be photographed in order to help the photographer compose the picture.

Regarding claim 23, please see the rejection of claim 22.

Regarding claim 24, Bauer discloses a method of using a camera having an optical axis, the method comprising: passing light along the optical axis through an open position of a shutter in one shutter position, and directing the light away from the optical axis after interaction with the shutter in a second shutter position (Fig. 1, element 16), said light directed away from the optical axis being directed towards an optical viewfinder located off the optical axis (Fig. 1, element 28); and providing an off-field view by an optical viewfinder (Fig. 1, element 28) because the light reaching the optical view finder is different from the light reaching the imaging plane, the light of the optical viewfinder being designated the off-field view (Fig. 1).

Bauer does not disclose splitting the light passed through the shutter into spectral components and passing the split component to different photoelectric-effect sensors; detecting each respective one of the spectral components with a corresponding photoelectric-effect sensor; and the off-field view image including a useful field image detected by the photoelectric-effect sensors and a peripheral field image contacting a periphery of the useful field image.

However, Ohshima discloses splitting the light passed through the shutter into spectral components and passing the split component to different photoelectric-effect sensors (Fig. 1, element 8); and detecting each respective one of the spectral components with a corresponding photoelectric-effect sensor (Fig. 1, element 9A-9C).

One of ordinary skill in the art at the time of the invention would have provided the spectral splitter and photoelectric-effect sensors for the film of Bauer in order to capture digital images in studio quality. As a result, it would have been obvious to one of ordinary skill in the art at the time of the invention to have provided the spectral splitter and photoelectric-effect sensors for the film of Bauer in order to capture digital images in studio quality.

Furthermore, Hines discloses a viewfinder with a wider field of view than will actually be photographed (Fig. 7A). One of ordinary skill in the art would have configured the viewfinder of Bauer with a wider field of view than will actually be photographed in order to help the photographer compose the picture (col. 6, lines 46-48). As a result, it would have been obvious to one of ordinary skill in the art at the time of the invention to have configured the viewfinder of Bauer to provide an off-field view image including a useful field image detected by the photoelectric-effect sensors and a peripheral field image contacting a periphery of the useful field image for providing a viewfinder with a wider field of view than will actually be photographed in order to help the photographer compose the picture.

Regarding claim 25, Hines discloses the peripheral field image surrounds the useful field image (Fig. 7A).

Regarding claim 26, please see the rejection of claim 25.

Regarding claim 27, please see the rejection of claim 25.

Regarding claim 28, please see the rejection of claim 25.

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Claims 12, and 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bauer, II (U.S. Pat. No. 3,692,394), in view of Ohshima et al. (U.S. Pat. No. 4,812, 911), in view of Hines (U.S. Pat. No. 6, 122, 455), and further in view of Glenn (U.S. Pat. No. 4,667,226).

Regarding claim 12, Bauer discloses the camera comprises at least one mode in which the shutter periodically switches between the closed and the open positions (Abstract: lines 1-4). Bauer does not disclose the switching period is smaller than the duration of retinal persistence.

However, Glenn teaches a reflecting rotating shutter (col. 4, lines 51-60; Fig. 1, element 101) that switches at a rate of 60 times per second (16.7 milliseconds/switch) (col. 2, lines 17-25). Furthermore, Glenn teaches motion reduces perception for about 300 milliseconds (col. 3, lines 49-51). Clearly, the switching period is smaller than the duration of retinal persistence. It would have been obvious to one of ordinary skill in the art at the time of the invention to configure the switching rate of the shutter to be consistent with typical video frame rates (~30 full frames per second or ~60 interlaced frames per second) (col. 1, lines 35-40 and 65-70; col. 2, lines 8-10). As a result, one of ordinary skill in the art would have configured the switching period to be smaller than the duration of retinal persistence in providing video at standard frame rates.

Regarding claim 14, Bauer discloses a conventional motor control circuit provides speed control for a rotating shutter (Fig. 2, element 52; col. 2, lines 53-56). Bauer does not disclose a control device maintaining the rotative element at a speed of rotation proportional to a frequency of a synchronization signal used for reading of the

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photoelectric-effect sensors; and a position sensor configured to detect a position of the rotative element, the position sensor and the control device enabling the rotative element to be phase-shifted with respect to the synchronization signal.

However, Glenn teaches an automatic control device (a motor control comprising a phase locked loop circuit) for the rotative element (Fig. 1, element 190; Fig. 4, element 195) at a speed of rotation proportional to the frequency of a signal given by a processing means (Fig. 1, element 190; Fig. 4, element 191) to the automatic control device (col. 5, lines 14-41), the signal being a synchronization signal for the reading of the sensors by a processing means (col. 5, lines 23-26), and in that the camera comprises a sensor of the position of the rotative element (Fig. 1, element 40), the position sensor and the automatic control device enabling the rotative element to be phase-shifted with respect to the synchronization signal (col. 5, lines 47-51). One of ordinary skill in the art would have provided the motor controller, sync. timing circuitry, and position sensor to rotate the motor at a constant rate (60 Hz) and to cause the vertical retrace of the camera to occur when no light from the image is going to the camera (col. 5, lines 47-60). As a result, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the motor controller, sync. timing circuitry, and position sensor to rotate the motor at a constant rate (60 Hz) and to cause the vertical retrace of the camera to occur when no light from the image is going to the camera.

Regarding claim 15, Glenn discloses the position sensor is a frame transfer sensor (col. 3, lines 14-19).

Claims 16, and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bauer, II (U.S. Pat. No. 3,692,394), in view of Ohshima et al. (U.S. Pat. No. 4,812, 911), in view of Hines (U.S. Pat. No. 6, 122, 455), and further in view of Okada et al. (U.S. Pat. No. 4,758,905).

Regarding claim 16, Bauer discloses the shutter comprises modes that can be selected by a user, including: a viewfinder mode fixing the rotative element at a position in which the mirror part intersects the optical axis (col. 1, lines 6-16; col. 2, lines 59-65); and a combined mode spinning the rotative element such that the mirror part and the aperture part periodically intersect the optical axis at a period smaller than a duration of retinal persistence (col. 2, lines 4-28; also see rejection of claim 12).

Neither Bauer nor Ohshima disclose a shutter mode comprises a user selectable video mode corresponding to a rotative element that always has an aperture part that intersects the optical axis. However, Okada discloses a shutter mode comprises a user selectable video mode corresponding to a rotative element that always has an aperture part that intersects the optical axis (col. 8, lines 26-42). One of ordinary skill in the art would have configured the shutter to remain continuously open for the purpose of capturing images continuously (col. 8, lines 26-42). As a result, it would have been obvious to one of ordinary skill in the art at the time of the invention to have provided a video mode fixing the rotative element at a position in which the aperture part intersects the optical axis for the purpose of capturing images continuously.

Regarding claim 18, Bauer discloses a reflective rotating shutter. Neither Bauer nor Ohshima disclose the shutter comprises at least two rotative elements having a

same axis of rotation and offset by an angular offset such that the mirror parts of the rotative elements overlap at least partially.

However, Okada discloses the shutter comprises at least two rotative elements having a same axis of rotation and offset by an angular offset such that the mirror parts of the rotative elements overlap at least partially (Fig. 1, elements 1, 2, 3, and 5; col. 3, line 59-col. 4, line 16). One of ordinary skill in the art would have provided overlapping shutter blades for the purpose of enabling a user to adjust the size of each opening (col. 4, lines 14-17). As a result, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the overlapping shutter blades of Okada with the reflecting rotating shutter of Bauer for the purpose of enabling a user to adjust the size of each opening.

Regarding claim 19, Okada further discloses the angular offset can be selected by the user (col. 3, line 59-col. 4, line 18; Fig. 1, elements 1, 2, and 3).


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Jelinek whose telephone number is (571) 272-7366. The examiner can normally be reached on M-F 9:00 am - 5:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached at (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Brian Jelinek
9/26/2005



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